

Secondary School Teachers Post Training Skills Enhancement and the Implementation of Agriculture Curriculum in Kimilili Sub-County Kenya

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Abstract:- Agriculture in Kenya is the backbone of the economy. One of the general objectives of teaching Agriculture in our Kenyan secondary schools is to enable students and teachers to take part in national development through Agricultural activities. The main objective of this study was to establish the influence of teacher post-training skills enhancement on the implementation of the Agriculture curriculum in public secondary schools in Kimilili sub-county of Bugoma Kenya. The study used functional curriculum theory and adopted a descriptive survey design. The researcher used questionnaires to obtain data on teacher factors in the implementation of the Agriculture curriculum. The study's targeted population was 49 public secondary schools that included 49 secondary school principals, 49 heads of department, 49 Agriculture teachers, and 784 Agriculture students. The study employed the Gay formula to calculate the sample size of 187 respondents including 10 secondary school principals, 10 heads of department, 10 teachers of agriculture and 157 students of Agriculture. The study employed simple random sampling to get the number of school principals in Kimilili Sub County; purposive sampling was used on students of Agriculture, teachers and heads of department. Both qualitative and quantitative data were collected using questionnaires. Quantitative data was analyzed by descriptive statistics such as frequencies percentages and means. the study established that post-training skills enhancement had a significant positive effect on the implementation of the Agriculture Curriculum

I. INTRODUCTION

A curriculum is the total of all the experience provided to the learner under the school's guidance (Bishop, 1985). Learning Agriculture in secondary school plays of essential role in promoting rapid economic growth by preparing students to enter the job market or pursue further studies in Agriculture (Laugo,2010). One of the primary objectives of teaching Agriculture in the 8.4.4 secondary school curriculum is to ensure that schools participate in rural development by integrating agricultural activities.

As Okugu (2011) puts it, curriculum implementation is a composite of the learner, teacher, teaching-learning resources, methodologies, anticipated experiences, and outcomes. This central position of school Agriculture is embedded in education, which improves people's lives by reducing poverty (United Nations, 2005).

According to Okugu (2011), implementing practical subjects such as Agriculture should set the student for a productive life and make tangible contributions to sustainable community livelihood. Interest in teaching and learning Agriculture in secondary schools seems to be growing because many governments seek assistance to implement the subject (Laugo 2009). The World Bank appears to be investing tirelessly in implementing Agriculture subjects in secondary schools, but there have been limited studies on teacher factors in the implementation (World Bank 2005).

According to Owoeye (2011), curriculum implementation is the composite of the learner, teacher, teaching-learning resources, teaching methodologies, and anticipated experiences. Various education commission reports, among them the Gachathi Report (G.O.K, 2011), point to the central position of Agriculture in the school curriculum. According to the United Nations (2005), this central position of school Agriculture is embedded in education, which improves people's lives by reducing poverty.

According to the proponent of curriculum reformists, school Agriculture helps people become productive by strengthening skills, abilities and improving health through better nutrition. Implementation of practical subjects such as Agriculture should prepare the students for a productive life and contribute to sustainable community livelihoods. (Clare, Andrew and Sarah 2006).

The introduction of the 8.4.4 system by the Government of Kenya in 1985, there was the introduction of new subjects. After a period of years, most of the studies were done to determine the performance, especially in Agriculture by looking at the factors that affected the performance. The results showed that Agriculture as a subject was deteriorating. Therefore, there is a lot to be done to improve the performance of Agriculture as a subject. The training of 1985 on the 8-4-4 framework was to replace the 7-4—2-3 framework. This implied the new system of education was to make students confident in offering comprehensive and practice-based programs (G.O. K, 1981). Agriculture as a subject was important for every public secondary school and the initial two years of additional school instruction as a pragmatic subject.

Despite the National Government allocating many resources to the education sector, Sifuna (2012), revealed that most of the secondary school performance in agriculture was challenged by factors such as lack of learning resources, improper teaching approaches, lack of content, and work overload to teachers. Thus, the current study focused on teacher training levels, teacher post-training skills

enhancement, teacher establishment and teacher time management practices on implementation of Agriculture curriculum in secondary schools in Kimilili Sub County Bungoma Kenya.

II. METHODOLOGY

The study used a descriptive research design. Descriptive research design is appropriate for educational fact-finding gives a lot of accurate information and produces statistical data for a phenomenal study (Orodho, 2002). This design was suitable for the study since it enables the researcher to gather information concerning teacher factors in the implementation of the secondary schools' Agriculture curriculum. The study targeted 49 Principals, 49 Heads of departments and 49 Agriculture teachers from public secondary schools in the Kimilili Sub-County. The target population of Agriculture students was 784 from the 49 public secondary schools in the Kimilili Sub-County. The researcher used simple random method to select Agriculture students from the 49 public secondary schools. The total targeted population summed to 931 respondents.

According to Gay (2012) stated that when the total population is less than 1000 respondents, 20% is accepted to carry out the research. In this case, the total target population 931 which is less than 1000. Based on the 20% index, simple random technique was used to select sample of 187 respondents were selected. Both qualitative and quantitative data were used to collect questionnaire. Quantitative data was analyzed by descriptive statistics.

III. RESULTS

The main objective of this study was to establish the influence of teacher post-training skills enhancement on the implementation of the Agriculture curriculum in public secondary schools in Kimilili sub-county Bugoma Kenya. Kaiser–Mayor–Mayor–Olkin's (KMO) and Bartlett's Tests for validity were used to test whether factor analysis was to be carried out for the concept under study.

Table 1: Kaiser–Mayor–Mayor–Olkin's (KMO) and Bartlett's Tests

	Items	AVE	Squared Correlatio ns	KMO	Bartlett's Test		
					χ^2	Df	P-value
teacher training skills enhancement	6	0.559	0.192	0.720	67.034	24	0.000
Curriculum implementation	6	0.683	0.319	0.751	59.310	24	0.000

The test is significant because it can indicate the sampling appropriateness of the obtained data, partial correlation, and the presence of an identity matrix in the model. The average variance (AVE) is a measure of the level of variance displayed by the constructs. KMO test values less than 0.5 are not accepted, as data must be more than 0.5 to be appropriate for factor analysis. To determine whether data is distributed regularly, Bartlett's test was combined with the KMO test. Because the KMO values were more than 0.5, factor analysis was suggested.

DF is the degree of freedom corresponding to the P values, and χ^2 is the chi-square value. At the 95 percent confidence level, the Bartlett values had significance values greater than 0.05, indicating that they were significant. As a result, the data from the pilot test was sufficient for factor analysis.

➤ Response Rate

In the study 187 questionnaires were distributed to respondents and all of them were filled and returned. Therefore, the response rate was 100% as shown in Table 2.

Table 2: Response Rate

Category	SampleSize	Number of questionnairesreturned	Percentage of return rate (%).
Agriculture Students	157	10	100.0
Agriculture Teachers	10	10	100.0
Head of Departments Agriculture Students	10	10	100.0
Principals	10	10	100.0
Total	187	187	

As a result, as indicated in Table 2, the response rate was 100%. According to Mugenda and Mugenda (2003), a response rate of 70% or higher is required for the findings to be communicated to a large number of the population.

➤ Anova

This is a statistical test used to evaluate the difference between the means of more than two groups. Table 3 explains the relationship between the teacher factors and the implementation of agriculture curriculum in secondary schools in Kimilili- Sub-County.

Table 3 ANOVA^a

, Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	21.832	4	5.216	4.765	.001 ^b
	Residual	98.704	90	1.074		
	Total	120.536	94			

The ANOVA results show that teacher factors affect curriculum in the implementation of secondary schools' Agriculture curriculum at a 5% significance level given a P value of 0.000 which is less than 0.05. The table illustrates an F statistic of 4.765 which is greater than the critical value (2.46) at 4 degrees of freedom.

Results in Table 3 show a regression model linking teachers' factors and curriculum implementation in Model 4.1

➤ Regression Coefficients

Table 4: A Regression Model

Model		Unstandardized Coefficients		T	Sig.
		B	Std. Error		
	(Constant)	4.132	.639	6.462	.000
	Teacher post-training skills enhancement	.156	.083	1.790	.001

a. Dependent variable: Curriculum Implementation

T- T-statistics from the table is 1.650 which is less than the t- t-statistics from the regression analysis at a 5% significance level. An indication that all the variables significantly affect students' performance.

$$Y = 4.132 + 0.282TTL + 0.156TPT - 0.205STR + 0.178TM$$

(Model 4.1)

From Table 14 and regression model 4.1, teacher post-training skills enhancement had a regression coefficient of 0.156 and a probability value of 0.001 which was less than 0.05. That is a unit increase in teacher post - training skills enhancement increases curriculum implementation in agriculture with 0.156 units. This indicated that post-teacher training had a significant positive effect on curriculum implementation at a 5% significance level. The findings concur with those of Offei, (2013) who did a study on improving senior high school students' performance in organic chemistry using a laboratory activity-based method in Ledzokuku- Krowor Municipal Assembly, Ghana.

IV. CONCLUSION

It was concluded that post-training skills enhancement had a significant effect on curriculum implementation in agriculture.

Also, it was concluded that post-training skills enhancement is supported by Workshops/seminars, KNEC training and in-service courses which contributes to factors affecting implementation of agriculture curriculum in public secondary schools in Kimilili sub-county.

RECOMMENDATIONS

The following recommendations were established from the study findings.

Schools should take advantage of teacher post-training through seminars, workshops, KNEC training to be able to instill additional knowledge on nationwide curriculum changes as this will have a great impact on the curriculum implementation.

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